AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A medical instrument comprising:

a guide wire that is inserted at one end through a vascular portion narrowed by deposits and extended at the other end out of a patient's body;

a rotating cutter that is rotatably and slidably guided over said guide wire and is driven to rotatingly cut away the deposits in said narrowed vascular portion;

a hollow drive shaft that is ~~operatively~~ connected to said rotating cutter and through which said guide wire is inserted;

a fixed sheath having inserted therein said drive shaft; and

a controller having a drive assembly for rotating said drive shaft;

wherein said rotating cutter is driven to perform intravascular treatment to establish patency of said vascular portion or to distend said vascular portion;

wherein said rotating cutter, ~~characterized in that:~~ in the case of further distending said narrowed vascular portion after cutting treatment, ~~said rotating cutter~~ can be pulled out of the patient's body along said guide wire, together with said drive shaft and said fixed sheath; and

wherein said rotating cutter has a deformable member that expands radially on said guide wire after being pulled out of the patient's body.

2. (Currently Amended) The medical instrument of claim 1, wherein~~characterized in that~~ the deformable member of said rotating cutter is formed by a plurality of cutting blades arranged side by side on the rotating cutter circumferentially thereof.

3. (Currently Amended) The medical instrument of claim 2, wherein~~characterized in that~~ said cutting blades are capable of plastic deformation in a radial direction of said rotating cutter to enlarge its diameter.

4. (Currently Amended) The medical instrument of claim 2, wherein ~~characterized in that~~ said cutting blades are deformable by a toggle mechanism radially of said rotating cutter to enlarge its diameter.

5. (Currently Amended) The medical instrument of claim 2, wherein ~~characterized in that~~ said cutting blades are ~~deformed~~ deformable by a wedge radially of said rotating cutter to enlarge its diameter.

6. (Currently Amended) The medical instrument of claim 1 ~~or 2~~, wherein~~characterized in that~~ said rotating cutter is provided with a thermal contraction or expansion member for deforming the deformable member radially of the rotating cutter to enlarge its diameter.

7. (Currently Amended) The medical instrument of claim 1 ~~or 2~~, wherein ~~characterized in that~~ the deformable member of said rotating cutter are formed of a ~~shape-memory alloy or similar~~ thermally deformable material comprising a shape-memory alloy.

8. (Currently Amended) The medical instrument of claim 1, wherein ~~characterized in that:~~ a jig is provided for deforming the deformable member of said rotating cutter radially thereof~~,~~; and wherein said jig is disposed coaxially with or in proximity to said drive shaft.

9. (Currently Amended) The medical instrument of claim 1, wherein ~~characterized in that:~~ said controller is provided with a mechanism for pushing out said rotating cutter from a distal end of said fixed sheath toward the treatment site forwardly thereof and a mechanism for pulling back said rotating cutter~~,~~; and wherein these mechanisms are actuated by a squeeze-type operating lever provided with an auto-retract mechanism and a position-retaining mechanism.

10. (Currently Amended) The medical instrument of claim 1, wherein ~~characterized in that:~~ ~~———~~a jig is provided for deforming the deformable member of said rotating cutter radially thereof~~,~~; and wherein said jig is formed by a one-hand operated, squeeze-type lever mechanism which utilizes a force-multiplying mechanism by a lever or cam.

11. (Currently Amended) The medical instrument of claim 1 ~~or 9~~, wherein ~~characterized in that~~ said controller is provided with a vibrating mechanism for reciprocating said rotating cutter along the guide wire.

12. (Currently Amended) The medical instrument of claim 1 ~~or 10~~, wherein ~~characterized in that~~ said controller has built therein a drive assembly for transmitting rotating ~~turning~~ force to said drive shaft~~,~~; and wherein said drive assembly has a motor whose rotary shaft is hollow for the insertion therethrough of said drive shaft.

13. (Currently Amended) The medical instrument of claim 11 ~~or 12~~, wherein ~~characterized in that:~~ said controller has a drive shaft chucking mechanism and a soft-sheath attaching/detaching mechanism.